Task 4. There are N lines on a two-dimensional plane, represented in the form $y = kx + b$, where k and b are integers and $k > 0$. All lines are stored in the form of k and b, and there are no overlapping lines. There may be one intersection point between two straight lines, with a maximum of $n*(n-1)/2$ intersections. We want to cover all these intersection points with a rectangle parallel to the coordinate axes. What is the minimum area of this rectangle? Return 0 if there are no intersection points, only one intersection point, or all intersection points lie on the same line parallel to the coordinate axes.

Input data: The data is located in the **input.txt** file. The first line of the file contains respectively sizes m, and each of the next m lines contains the values of the elements of k and b.

Output data: The response (one integer) must be written to the **output.txt** file.

Program execution time: no more than 1 second.

Note: The return value should be a floating-point number. Results within an absolute or relative error of 10^{-4} from the standard answer are considered correct.

$1 <=$ lines.length $<= 10^5$ and lines[i].length $== 2$

$1 <=$ lines[0] $<= 10000$

$-10000 <=$ lines[1] $<= 10000$

Examples:

Test1:	Answer1:	Test2:	Answer2:
3	48.00000	2	0.00000
2 3		8 8	
3 0		3 4	
4 1			